Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1.   (Currently Amended) A method for generating a message integrity code in a wireless local area network operating under an IEEE 802.11 standard, comprising:

separate a message into a plurality of fragments;

suppressing a sequence number input to a message integrity code (MIC) algorithm[[,]]; and

calculating a message integrity code based in part on a fragment number;

encrypting the MIC without the sequence number;

assigning packet numbers to message fragments in the order of fragmentation;

assigning a sequence number to the message which is the same for each message fragments; and

transmitting the message to a receiving station by a transmitter.

2 - 4. (Cancelled).

5.   (Currently Amended) A method according to Claim 41, further comprising, upon receipt of a plurality of messages having the same sequence number at a receiving station, checking the received packet numbers for a complete sequence.

6.   (Original) A method according to Claim 5, further comprising rejecting a message if it does not have a complete sequence of packet numbers.

7.   (Currently Amended) In a wireless local area network message protocol in which each data unit is assigned a sequence number and a fragment number, a method of generating a message integrity code (MIC) for a data unit comprising:

using the fragment number, but not the sequence control number as an input to a message integrity code (MIC) algorithm; and

generating the MIC before the sequence number has been assigned to a packet;

8 - 9   (Cancelled).

10.   (Currently Amended) The method of Claim 7, further comprising assigning a packet number to each message fragment, receiving messages at a receiving station and checking packet numbers of received message for a complete sequence of packet numbers.

11.   (Original) The method of Claim 10, further comprising rejecting messages which do not have a complete sequence of packet numbers.

12.   (Currently Amended) A method for providing security for messages transmitted over a wireless local area network, wherein the messages have a transmitted message integrity code (MIC) encrypted without a sequence number and assigned packet numbers to message fragments in the order of fragmentation, said method comprising:

receiving, by a receiver, a plurality of messages with the same sequence number; and

checking the packet numbers of each of the plurality of messages in the order received to determine whether the plurality of messages include a complete sequence of packet numbers

~~assigning sequence numbers to all messages in the order of transmission and including the sequence number in each transmitted message,~~

~~assigning fragment numbers to all messages in the order of fragmentation of each message and including the fragment number in each transmitted message, and~~

~~calculating a transmitted message integrity code based in part on the fragment number for each transmitted message and including the transmitted message integrity code in each transmitted message.~~

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13.   (Cancelled).

14.   (Original) A method according to Claim 12, further comprising:

upon receipt of a message, calculating a received message integrity code based in part on the fragment number for the received message.

15.   (Original) A method according to Claim 14, further comprising:

comparing the transmitted message integrity code to the received message

integrity code.

16.   (Original) A method according to Claim 15, further comprising:

rejecting the received message if the transmitted message integrity code does not

match the received message integrity code.

17.   (Cancelled).

18.   (Original) A method according to Claim ~~17~~12, further comprising:

if the plurality of messages has an incomplete sequence of packet numbers,

rejecting the messages identified by the sequence number.

19.   (Currently Amended) A wireless network station comprising a processor

programmed to:

suppress a sequence number input to a message integrity code (MIC)

algorithm[[,]]; ~~and~~

calculate a message integrity code based in part on a fragment number.

encrypt the MIC without the sequence number;

assign a packet number to each message fragment in the order of fragmentation;

and

assign a sequence number to the message which is the same for each message fragments.

20. (Original) A wireless network station according to Claim 19 wherein the processor is programmed to:

transmit a message including the message integrity code over a wireless local area network.

21. (Currently Amended) A wireless network station according to Claim 19 wherein the processor is programmed to:

receive a message including a message integrity code over a wireless local area network[[,]];

suppress a sequence number input to a message integrity code algorithm[[,]]; and

calculate a message integrity code for the received message based in part on a fragment number.

22. (Currently Amended) A wireless network station according to Claim 21 wherein the processor is programmed to:

compare the message integrity code of the received message to the message integrity code calculated for the received message[[,]]; and

if the message integrity code of the received message does not match the message integrity code calculated for the received message, reject the received message.

23.   (Currently Amended) A wireless network station according to Claim 21 wherein the processor is programmed to:

upon receipt of a plurality of messages having a common sequence number, check packet numbers of the messages for a complete sequence[[,]]; and

if the packet number sequence is not complete, reject all of the received with the common sequence number.

24.   (Currently Amended) A wireless network station comprising a processor programmed to:

assign sequence numbers to all messages in the order of transmission and include the sequence number in each transmitted message[[,]];

assign fragment numbers to all messages in the order of fragmentation of each message and include the fragment number in each transmitted message[[,]]; and

calculate a transmitted message integrity code based in part on the fragment number for each transmitted message and include the transmitted message integrity code in each transmitted message.

25.	(Currently Amended) A wireless network station according to Claim 24 wherein the processor is programmed to:

upon receipt of a message, calculate a received message integrity code based in part on the fragment number for the received message[[,]]:

compare the transmitted message integrity code to the received message integrity code[[,]]: and

reject the received message if the transmitted message integrity code does not match the received message integrity code.

26.	(Currently Amended) A wireless network station according to Claim 24 wherein the processor is programmed to:

upon receiving a plurality of messages having the same sequence number, check the packet numbers of each of the plurality of messages to determine whether the plurality of messages include a complete sequence of packet numbers[[,]]: and

if the plurality of messages has an incomplete sequence of packet numbers, reject the messages identified by the sequence number.